UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,550	08/22/2006	Mark J. Nixon	06005/41127	8474

45372 7590 04/12/2012

MARSHALL, GERSTEIN & BORUN LLP (FISHER)
233 SOUTH WACKER DRIVE
6300 WILLIS TOWER
CHICAGO, IL 60606

EXAMINER	
DISTEFANO, GREGORY A	

ART UNIT	PAPER NUMBER
2175	

NOTIFICATION DATE	DELIVERY MODE
04/12/2012	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mgbdocket@marshallip.com

Office Action Summary	Application No.	Applicant(s)	
	10/590,550	NIXON ET AL.	
	Examiner	Art Unit	
	GREGORY A. DISTEFANO	2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/3/2012*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-6,8-19,21 and 24-29* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-6, 8-19, 21, and 24-29* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed 4/3/2012.

2. Claims 1-6, 8-19, 21, and 24-29 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-6, 8-19, 21, and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thurner et al., US 7,165,226 (Hereinafter, Thurner) in view of Eryurek et al. (US 7,515,977), hereinafter Eryurek.

Regarding Claim 1, Thurner discloses "*an object entity stored in a computer-readable storage medium for use with a user interface system, wherein the object entity represents a process plant element of the process plant, the object entity comprising: a first portion defining graphics for a depiction of the process plant element via the user interface*". Specifically, the Workbench contains a number of tools for building and modifying the Data Structures and Dataflow diagrams. An Object Designer provides graphical design of objects in a number of different views, including Tree, Table, XML, and HTML views (Thurner, col 3, ln 43-47).

Thurner also discloses "*and, a second portion identifying a data source for data indicative of on-line operation of the process plant element*". Specifically, other views (not displayed) enable the visualization, design and modification of business objects and business process, runtime GUIs, electrical and mechanical construction of the plant, diagnostic, maintenance, scheduling, information management, PLC-programming, batch design, recipe management, object mappings and project deployments (Thurner, col 2, ln 55-65).

Thurner also discloses "*wherein the first portion is set forth in a declarative format*" (Thurner, col 3, ln 43-47).

However, Thurner does not explicitly teach of dynamic rendering of process plant elements. Eryurek teaches the following:

Eryurek discloses "*wherein data indicative of the online operation of the process plant element is retrieved from the data source when the graphics for the depiction of the process plant element are rendered for display via the user interface so that the depiction of the process plant element is rendered dynamically based on the data indicative of the on-line operation of the process plant element*", (column 20, lines 43-47), i.e. the graphic displays 41 created by execution of the process configuration modules 39 are designed to dynamically show online measurements and actuators that interface with the process control system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the interface of Thurner with the dynamic rendering capability of Eryurek. One of ordinary skill in the art would have been

motivated to have made such modifications because both Thurner and Eryurek are directed to displays of a process plant environment and Thurner directly suggests the use of simulations in the abstract.

Regarding Claim 2, Thurner also discloses "*the object entity of claim 1, wherein the first portion defines an instance of a shape object utilized in rendering the depiction*". Specifically, in the first arrangement, the left (L) and upper views (U), i.e., panes are coupled, according to a predetermined relationship, such that selection of an object in either pane results in a corresponding refocusing of the other pane on a related object (Thurner, col 3, ln 65- col 4, ln 5).

Regarding Claim 3, Thurner also discloses "*the object entity of claim 1, wherein the first portion defines an instance of a composite shape object utilized in rendering the depiction*". Specifically, in the first arrangement, the left (L) and upper views (U), i.e., panes are coupled, according to a predetermined relationship, such that selection of an object in either pane results in a corresponding refocusing of the other pane on a related object (Thurner, col 3, ln 65- col 4, ln 5).

Regarding Claim 4, Thurner also discloses "*the object entity of claim 1, wherein the declarative format is in accordance with an extensible markup language*" (Thurner, col 3, ln 43-47).

Regarding Claim 5, Thurner also discloses "t*he object entity of claim 1, wherein the declarative format comprises a vector graphics format for script defining the graphics*" (Thurner, col 3, ln 50-55).

Regarding Claim 6, Thurner also discloses "*the object entity of claim 1, wherein the first portion further defines a data conversion parameter to specify a graphical depiction of the data indicative of on-line operation of the process plant element*". Specifically, other views (not displayed) enable the visualization, design and modification of business objects and business process, runtime GUIs, electrical and mechanical construction of the plant, diagnostic, maintenance, scheduling, information management, PLC-programming, batch design, recipe management, object mappings and project deployments (Thurner, col 2, ln 55-65).

Regarding Claim 8, Thurner also discloses "*the object entity of claim 7, wherein the third portion is set forth in the declarative format*" (Thurner, col 3, ln 43-47).

Regarding Claim 9, Thurner also discloses "*the object entity of claim 1, wherein the second portion is set forth in the declarative format*" (Thurner, col 3, ln 43-47).

Regarding Claim 10, Thurner also discloses "*the object entity of claim 1, wherein the graphics include animated elements having animation indicative of the on-line operation of the process plant element*". Specifically, other views (not displayed)

enable the visualization, design and modification of business objects and business process, runtime GUIs, electrical and mechanical construction of the plant, diagnostic, maintenance, scheduling, information management, PLC-programming, batch design, recipe management, object mappings and project deployments (Thurner, col 2, ln 55-65).

Regarding Claim 11, Thurner also discloses "*a user interface system for a process plant, comprising: a computer processor, a computer-readable storage medium having instructions stored thereon which, when executed by the computer processor provides*" and "*a graphic display editor to configure a process graphic display having a graphic display element representative of a process plant element of the process plant*". Specifically, the Workbench contains a number of tools for building and modifying the Data Structures and Dataflow diagrams. An Object Designer provides graphical design of objects in a number of different views, including Tree, Table, XML, and HTML views (Thurner, col 3, ln 43-47).

Thurner also discloses "*wherein configuration information for the process graphic display generated by the graphic display editor is stored in the computer-readable medium in accordance with a declarative language*" (Thurner, col 7, ln 58-65).

Thurner also discloses "*a graphics rendering engine to generate a depiction of the process graphic display during runtime based on Commands derived from the configuration information*". Specifically, other views (not displayed) enable the visualization, design and modification of business objects and business process, runtime GUIs, electrical and mechanical construction of the plant, diagnostic,

maintenance, scheduling, information management, PLC-programming, batch design, recipe management, object mappings and project deployments (Thurner, col 2, ln 55-65).

Thurner also discloses "*a conversion engine for generating commands in accordance with a further declarative language based on graphics related information of the configuration information and for generating*". The commands generated in Thurner are generated in Declarative language formats such as the Object Designer provides graphical design of objects in a number of different views, including Tree, Table, XML, and HTML views (Thurner, col 3, ln 43-47).

Thurner also discloses "*a data source reference file from the configuration information for the process graphic display that identifies a data source for data to be displayed in connection with the graphic display element*". Specifically, the Multiple Coupled Browser Views Workbench of the present invention provides use of a display device, e.g., Browser or GUI, or the like, to couple several views of a manufacturing plant such that, if the user navigates through one view, all coupled views adjust their focus accordingly. As shown in FIG. 4a, there are at least three permutations of how the views can be coupled as provided by the present invention (Thurner, col 3, ln 57-65).

However, Thurner does not explicitly teach of dynamic rendering of process plant elements. Eryurek teaches the following:

Eryured also discloses, "*generating commands specifying a data conversion routine for the graphic display element for converting data values from the data source*

to dynamically render a depiction of the process plant element based on the data values", (column 20, lines 43-47), i.e. the graphic displays 41 created by execution of the process configuration modules 39 are designed to dynamically show online measurements and actuators that interface with the process control system

Eryured also discloses "*wherein data indicative of the online operation of the process plant element is retrieved from the data source when the graphics for the depiction of the process plant element are rendered for display via the user interface so that the depiction of the process plant element is rendered dynamically based on the data indicative of the on-line operation of the process plant element*", (column 20, lines 43-47), i.e. the graphic displays 41 created by execution of the process configuration modules 39 are designed to dynamically show online measurements and actuators that interface with the process control system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the interface of Thurner with the graphical capability of Eryurek. One of ordinary skill in the art would have been motivated to have made such modifications because both Thurner and Eryurek are directed to displays of a process plant environment and Thurner directly suggests the use of graphically monitoring plant elements in the abstract.

Regarding Claim 12, Thurner also discloses "*the user interface system of claim 11, wherein the declarative language defines an extensible format for expressing the configuration information*" (Thurner, col 3, ln 43-47).

Regarding Claim 13, Thurner also discloses "*the user interface system of claim 11, wherein the configuration information is stored in accordance with an object model framework based on the declarative language*" (Thurner, col 3, ln 43-47).

Regarding Claim 14, Thurner also discloses "*the user interface system of claim 13, wherein the object model framework defines primitive shape objects made available by the graphic display editor to configure the process graphic display to include an additional graphic display element constructed from the primitive shape objects*". Specifically, other views (not displayed) enable the visualization, design and modification of business objects and business process, runtime GUIs, electrical and mechanical construction of the plant, diagnostic, maintenance, scheduling, information management, PLC-programming, batch design, recipe management, object mappings and project deployments (Thurner, col 2, ln 55-65).

Regarding Claim 15, Thurner also discloses "*the user interface system of claim 13, wherein the object model framework defines a composite object made available by the graphic display editor to configure the process graphic display to include an additional graphic display element constructed from the composite object*". Specifically, other views (not displayed) enable the visualization, design and modification of business objects and business process, runtime GUIs, electrical and mechanical construction of the plant, diagnostic, maintenance, scheduling, information management, PLC-

programming, batch design, recipe management, object mappings and project deployments (Thurner, col 2, ln 55-65).

Regarding Claim 16, Thurner also discloses "*the user interface system of claim 13, wherein the graphic display editor comprises graphical editing tools to create the composite object from previously constructed process model objects stored in the computer-readable medium*". Specifically, other views (not displayed) enable the visualization, design and modification of business objects and business process, runtime GUIs, electrical and mechanical construction of the plant, diagnostic, maintenance, scheduling, information management, PLC-programming, batch design, recipe management, object mappings and project deployments (Thurner, col 2, ln 55-65).

Regarding Claim 17, Thurner also discloses "*the user interface system of claim 16, wherein the graphical editing tools are defined via the object model framework*" (Thurner, col 3, ln 43-47).

Regarding Claim 18, Thurner also discloses "*the user interface system of claim 11, wherein the declarative language is an extensible markup language*" (Thurner, col 3, ln 43-47).

Regarding Claim 19, Thurner also discloses "*the user interface system of claim 11, wherein the declarative language defines an XML-based format for describing the configuration information*" (Thurner, col 3, ln 43-47).

Regarding Claim 21, Thurner also discloses "*the user interface system of claim 11, wherein the further declarative language sets forth the graphics-related language in accordance with a vector graphics format*" (Thurner, col 3, ln 43-47).

Regarding Claim 26, Thurner also discloses "*an object entity stored in a computer-readable storage medium for use with a user interface system for a process plant, wherein the object entity represents a process plant element of the process plant, the object entity comprising: a graphics portion defining graphics for a depiction of the process plant element via the user interface*". Specifically, other views (not displayed) enable the visualization, design and modification of business objects and business process, runtime GUIs, electrical and mechanical construction of the plant, diagnostic, maintenance, scheduling, information management, PLC-programming, batch design, recipe management, object mappings and project deployments (Thurner, col 2, ln 55-65).

Thurner also discloses "*a parameters portion identifying configurable aspects of the graphics*". Specifically, the Workbench provides an Integrated Engineering Environment in which a graphical configuration of distributed workflows and data flows are visually monitored and controlled (Thurner, col 3, ln 30-35).

Thurner also discloses "*a navigation portion identifying data sources for content to be displayed in connection with the graphics*" (Thurner, col 3, ln 55-56).

Thurner also discloses "*wherein the graphics portion and the parameters portion, and the navigation portion are stored in the computer-readable medium discretely*" (Thurner, col 7, ln 58-65).

However, Thurner does not explicitly teach of dynamic rendering of process plant elements. Eryurek teaches the following:

Eryurek discloses "*wherein data indicative of the online operation of the process plant element is retrieved from the data source when the graphics for the depiction of the process plant element are rendered for display via the user interface so that the depiction of the process plant element is rendered dynamically based on the data indicative of the on-line operation of the process plant element*", (column 20, lines 43-47), i.e. the graphic displays 41 created by execution of the process configuration modules 39 are designed to dynamically show online measurements and actuators that interface with the process control system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the interface of Thurner with the dynamic rendering capability of Eryurek. One of ordinary skill in the art would have been motivated to have made such modifications because both Thurner and Eryurek are directed to displays of a process plant environment and Thurner directly suggests the use of simulations in the abstract.

Regarding Claim 27, Thurner also discloses "*the object entity of claim 26, wherein the computer-readable medium comprises a plurality of memory storage devices, such that the graphics portion, the parameters portion and the navigation portion, are not stored on a single memory storage device*" (Thurner, col 7, ln 58-65).

Regarding Claim 28, Thurner also discloses "*the object entity of claim 26, wherein the graphics portion comprises a description in an XML-based graphics language*" (Thurner, col 3, ln 43-47).

Regarding Claim 29, Thurner also discloses "*the object entity of claim 1, further comprising a third portion defining a method to be implemented to simulate the on-line operation of the process plant element*", (column 7, lines 38-41), i.e. the plurality of applications 32 may be used in conjunction with and configured using a set of process configuration modules 39, which may provide simulation of an operation associated with a portion of a process plant 10.

Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thurner et al., US 7,165,226 (Hereinafter, Thurner) in view of Gilbert et al. (US 2007/0132779).

Regarding Claim 24, Thurner also discloses "*a method of configuring a user interface system for a process plant, comprising: using an object defining a composite*

graphical element to create a plurality of instances thereof in respective process graphic displays to be depicted via the user interface, wherein the composite graphical element is composed of vector graphic entities". Specifically, the Workbench contains a number of tools for building and modifying the Data Structures and Dataflow diagrams. An Object Designer provides graphical design of objects in a number of different views, including Tree, Table, XML, and HTML views (Thurner, col 3, ln 43-47). Further See Figs. 3b and c for vector graphics.

Thurner also discloses "*storing data in a computer-readable medium of the user interface system defining the plurality of instances of the composite graphical element*" (Thurner, col 7, ln 58-65).

Thurner also discloses "*modifying the object defining the composite graphical element*". Specifically, the Workbench contains a number of tools for building and modifying the Data Structures and Dataflow diagrams. An Object Designer provides graphical design of objects in a number of different views, including Tree, Table, XML, and HTML views (Thurner, col 3, ln 43-47).

However, Thurner does not explicitly teach of a method of propogating a modification to a plurality of instances of a graphical element. Gilbert teaches the following:

propagating the modification of the plurality of instances of the composite graphical element and automatically updating each of the plurality of instances of the composite graphical element to reflect the modification, (pg. 7, paragraph [0053]), i.e. class objects remain tied to the children objects instantiated therefrom, so that changes

to the class objects can be automatically propagated to the children objects, even when these children objects are instantiated within a runtime environment.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the interface of Thurner with the object modification method of Gilbert. One of ordinary skill in the art would have been motivated to have made such modifications because both Thurner and Gilbert are directed to displays of a process plant environment

Regarding Claim 25, Thurner also discloses "*the method of claim 24, wherein the object comprises a definition set forth in an XML-based graphics language*" (Thurner, col 3, ln 43-47).

Response to Arguments

4. Applicant's arguments filed 4/3/2012 have been fully considered but they are not persuasive.

Applicant first argues on page 8 of the response that neither Thurner nor Eryurek teach or suggests "an object entity representing a process plant element comprises a definition of graphics is set forth in a declarative format".

The examiner respectfully disagrees.

The best support for applicant's limitation may be seen in applicant's Fig. 15. As may be seen in said Figure, objects are describes in a markup language and connected

using arrows. As may be seen Thurner's Figs. 3A and 3C, different objects are connected using arrows with declarative statements defining components and links.

Applicant next argues on page 9 of the response that neither Thurner nor Eryurek teach or suggests "rendering dynamically based on data indicative of the online operation of the process element".

The examiner respectfully disagrees.

Eryurek explicitly teaches in column 20, lines 43-47, "the graphic displays 41 created by execution of the process configuration modules 39 are designed to dynamically show online measurements and actuators that interface with the process control system"

With regard to applicant's arguments to claims 11 and 26, as described above, Eryurek explicitly teaches of utilizing online measurements for dynamic rendition of display elements.

Applicant next argues on page 10 of the response that neither Thurner nor Gilbert teach or suggests "the composite graphical element is composed of vector graphic entities".

The examiner respectfully disagrees.

The reference of "vector graphics", taken from http://en.wikipedia.org/wiki/Vector_graphics has been submitted purely for the purposes

of support. As vector graphics describes, "the use of geometrical primitives such as points, lines, curves, and shapes or polygons, which are all based on mathematical expressions, to represent images in computer graphics". As may be seen in Thurner's Figs. 3a and 3c, Thurner clearly utilizes "vector graphic entities" with the use of lines, shapes and polygons. Furthermore, applicant admits in page 10 of the response that "Gilbert includes visualizations that are based on primitive shapes such as circles and rectangles".

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY A. DISTEFANO whose telephone number is

(571)270-1644. The examiner can normally be reached on Monday through Friday, 9 a.m. - 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Bashore can be reached on 571-272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GREGORY A DISTEFANO/
Examiner, Art Unit 2175
4/9/2012

/William Bashore/

Supervisory Patent Examiner, Art Unit 2175